REMARKS/ARGUMENTS

Claims 1-13 remain in this application.

The Examiner has rejected Claim 11 under 35 U.S.C. 101. Claim 11 has been amended to obviate this rejection.

The Examiner has rejected Claims 1-13 as being unpatentable over Bakre in view of Shionozaki. Applicants respectfully traverse this rejection.

Referring to Bakre, there is disclosed a switch-based network architecture for IP multicast and integrated services. Bakre is directed to mapping IP and different levels of quality of service over an ATM network. Bakre teaches the method and architecture is based on multicast switches, allow RSVP applications running on an ATM host to seamlessly participate in Internet wide multicast sessions. See column 1, lines 8-19. This is the context of Bakre, and its teachings are only applicable to such multicast switches. There is no basis for the Examiner to apply the teachings of Bakre to PVx connections, let alone such teachings regarding multicast switches for RSVP would even work. It is respectfully submitted this is improper. The Examiner is completely ignoring the "PVx" limitation of applicants' claims. To cite Shionozaki for PVx connections does not change this fact or make the teachings of Bakre broader or different.

Bakre teaches a network architecture is constituted by one multicast switch per logical IP subnet in an ATM cloud. The multicast server in an ATM network allows aggregation of traffic for multiple senders that can be sent out on a single VC to the receivers. The multicast server is also capable of processing RSVP control messages in performing call emission control for RSVP

flows. On the edges of the ATM cloud, border or edge multicast switches help to aggregate multicast receivers inside the ATM cloud for outside servers and vice versa. See column 8, lines 47-65.

Each multicast switch can communicate with all other multicast switches in the ATM cloud using a point to multipoint VC. The multicast switches constituted by switch hardware and a switch controller that can establish the translation tables for cell forwarding. A multicast routing component of the multicast switch consists of three parts. The first part is responsible for maintaining group membership information for the logical IP subnets. The second part is responsible for communicating with its peer functions running another multicast switches in the ATM cloud. The third part of the multicast routing component provides an inter domain multicast routing protocol interface to IP routers located outside the ATM cloud. See column 9, lines 45-60.

All the multicast switches in an ATM cloud initially form a mesh of point to multipoint among themselves. Once the control VCs are established, multicast forwarding within each logical IP subnet is performed as follows. A multicast address resolution server is employed in each logical IP subnet to resolve an IP multicast address to ATM addresses of the receivers that have joined the group represented by the multicast address. The multicast switch aggregates receivers within its logical IP subnet for outside sensors and outside receivers for local senders. To initiate quality of service-based multicast, a sender starts sending path messages to its local multicast switch. These path messages are formed over the improper and inter-logical IP subnet control VCs by the sender of multicast switches. Multicast switches combine the resource reservation requests from their local receivers and send an aggregate message to the senders multicast switch. The senders multicast switch collects requests from other multicast switches and its local receivers and forms an aggregate request to the sender.

Reservations among multicast switches are handled using ATM signaling protocols, thus allowing the ATM network to best manage the quality of service and the path to multicast switches to multicast switches point to multipoint VCs. An RSVP soft state is maintained by the RSVP handler function of each multicast switch. RSVP requires routers to monitor RSVP flows using inactivity timers and discard the state for flows that have not seen any traffic for a configured amount of time.

As is evident from the above description, the entire teachings of Bakre are centered around and require a multicast switch in regard to an ATM cloud. The teachings of Bakre really have nothing at all to do with applicants' claimed invention. Furthermore, the Examiner cites figure 4, reference 16 as support for the limitation of sending connections to the network, with at least one of the output mechanisms nonmodifiable. However, referring specifically to figure 4 and reference 16, it refers to a logical IP subnet control VC which emanates from its respective multicast switch to its respective ATM host. Referring to the text regarding figure 4, Bakre simply teaches that in figure 4, all the multicast switches and ATM cloud initially form a mesh of point-to-multipoint control VCs. Propagation of control messages from a multicast switch to the multicast receivers within the logical IP subnet is handled using separate point to multipoint control VCs 16. This inter-logical IP subnet control VC 16 is routed at the multicast switch in every multicast receiver and is added to the control VCs 16 as a leaf node when it first registers as a receiver with the local Mars for any multicast group.

In regard to the Office Action, the Examiner refers to column 16, lines 24-45 of Bakre for support of the limitation in Claim 1 of applicants that at least one of the output mechanisms are nonmodifiable. However, Claim 1 has the limitation that the controller dynamically modifies parameters for the connections of the fabric, the output mechanism, and the plurality of the

output mechanisms based on the modify signal. It is only the output mechanism which is non-modifiable that has its connection or connections destroyed and then re-created.

Bakre specifically teaches that RSVP allows receivers to change their QOS reservations at any time even after a multicast session has been established. It is somewhat difficult to support dynamic quality of service and ATM networks. The only possible way to change quality of service for an existing data VC in the ATM network is establish a new VC with the modified quality of service parameters and migrate traffic from the old AC to the new one. See column 16, lines 24-32 of Bakre. This is in direct contrast to applicants' claimed invention where the controller dynamically modifies parameters for the connections of the fabric, the input mechanism, and the plurality of the output mechanisms except for the non-modifiable output mechanism based on a modify signal. Except for the connections of the nonmodifiable output mechanism, applicants' claimed invention does not establish any new connection, as is taught by Bakre. It is respectfully submitted, the term "dynamically" means to change that which exists, it does not mean to destroy. Where the output mechanism cannot be dynamically changed, then the connection is destroyed and re-created in applicants' claimed invention. Accordingly, Bakre teaches away from any type of dynamic modification of parameters for connections, instead teaching any combination to be modified must be destroyed and recreated with the new QOS, and furthermore does not teach or suggest the use of a modify signal to cause the dynamic change. Bakre has no teaching of modifying any connection without destroying it.

Moreover, just as importantly, the teaching the Examiner relies upon simply mentions “receivers” and is silent about the input and output mechanisms and the fabric. It is only by the Examiner reading the limitations of applicants’ claims into the teachings of Bakre regarding these components of the receiver does the Examiner arrive at applicants’ claimed invention. It is

respectfully submitted this is improper also. There is no teaching or suggestion in Bakre that the elements of the receiver have the limitations of applicants' claimed invention.

Furthermore, applicants' invention of Claim 1 specifically has the limitation of switching permanent virtual connections. Applicants have taken the time in the specification to explain carefully, starting on page 7, line 14 the distinctions regarding permanent virtual paths and soft permanent paths. There is no teaching or suggestion that Bakre has any capability, let alone need, or concern of switching permanent virtual connections.

In regard to Shionozaki, the Examiner has simply cited Shionozaki for establishing releasing connections for SVC and PVC. However, there is no teaching or suggestion whatsoever how the establishing and the releasing of connections of SVC and PVCs taught by Shionozaki would be effected in some form or fashion by Bakre. It is respectfully submitted the Examiner is finding some arbitrary reference that has the teaching the Examiner recites, and simply applies it to Bakre to arrive at applicants' claimed invention. It is respectfully submitted this is using hindsight, which is improper and patent law. Applicants respectfully submit they did not discover permanent virtual connections or switched virtual connections, as found in Claim 8, but applicants submit that in the context of the switches as found in the claims, they are unique in handling or dealing with permanent virtual connections or switched virtual connections.

Accordingly, Claims 1-13 are patentable over the applied art of record.

OIPE IAP40
JAN 15 2009
PATENT & TRADEMARK OFFICE

In view of the foregoing amendments and remarks, it is respectfully requested that the outstanding rejections and objections to this application be reconsidered and withdrawn, and Claims 1-13, now in this application be allowed.

CERTIFICATE OF MAILING
I hereby certify that this correspondence is being deposited with the U.S. Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on

1/12/09
Date

Ansel M. Schwartz
Registration No. 30,587

Respectfully submitted,

Ansel M. Schwartz
Reg. No. 30,587
201 N. Craig Street, Suite 304
Pittsburgh, PA 15213
Tel.: (412) 621-9222